



## Chapter Four

### ENVIRONMENTAL ASSESSMENT

#### DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES INCLUDING NO ACTION

##### Proposed Action

Cape Lookout National Seashore, a unit of the National Park Service, Department of the Interior, proposes to improve overnight accommodations and transportation services to persons visiting North Core Banks (excluding the Portsmouth Island area) and South Core Banks at Cape Lookout National Seashore, Carteret County, North Carolina. In summary, the Preferred Plan is:

1. Negotiate long-term contracts with concessionaires to transport visitors and vehicles from the towns of Davis, North Carolina and Atlantic, North Carolina to Great Island and Long Point, both sites on the Core Banks, Cape Lookout National Seashore, North Carolina.
2. Improve overnight accommodations by removing old cabins at Great Island and constructing 30 new cabins.
3. Add 10 new cabins at Long Point.
4. Improve IBP relationship by issuing biennial IBPs to small craft operators that provide transport services to visitors to the Cape Lookout Keeper's Quarters area.
5. The number of parking spaces near the Keeper's Quarters would be reduced.

##### Background

The purpose of this document is to initiate the administrative process required by the National Environmental Policy Act to provide evidence and analysis for determining the path of environmental compliance for the proposed action.

The need is to improve overnight accommodation and transportation services for persons visiting North Core Banks (excluding the Portsmouth Island area) and South Core

Banks. The amendment facilitates the process for selecting and recommending the implementation of a preferred alternative action that most improves visitor services while continuing to preserve and protect the seashore's natural and cultural resources for the enjoyment of future generations.

In a 20-year span, visitation to the national seashore rose from approximately 27,000 people to over 380,000. A majority of these persons are day-use visitors. Visitation is greatest during the summer months and concentrated on the southern end of South Core Bank. Consequently, summer occupancy of cabins has risen nearly 25 percent over the past three years at the Long Point location, while the numbers at the Great Island location have remained fairly constant. The increase in occupancy at Long Point may be attributed to the upgraded facilities. Cabins at Long Point are primitive and appeal to a wider variety of park visitors who prefer that type of experience.

The NPS permits the operation of three small ferry companies that provide passenger (no vehicles) ferry service from Harkers Island to the Cape Lookout Keeper's Quarters area. These service providers are issued Incidental Business Permits (IBP) on an annual basis to provide interim small boat service to the lighthouse area. Other operators leave from Beaufort and Morehead City. Another service travels between Ocracoke and Portsmouth Island.

Two independent concessionaires operate services to the Great Island area and the Long Point area (located on the North Core Banks) with passenger and vehicle ferry service and overnight accommodations. They transport visitors and vehicles to these areas and manage and maintain cabin facilities at each site. Concession permits/contracts for ferry and cabin operations at Great Island and Long Point expired in 1990. National Park Service policy regarding long-term concession contracts underwent an extensive review and updating process from 1991 through 1998. During this period of review, all long-term concessionaire permits/contracts at Cape Lookout National Seashore were renewed annually or biennially in anticipation of the revised regulations. Now that new NPS policy governing long-term contracts has been issued, Cape Lookout National Seashore wants to negotiate new long-term concession contracts for the ferry and cabin operations. The NPS believes that a long-

term contract would improve visitor services by enabling concessionaires to make needed capital investments in their accommodation and transportation operations and still realize a reasonable profit.

The focus of this amendment will address potential changes to the current general management plan relevant to overnight accommodations and transportation services at the areas previously noted.

## Alternatives

The National Park Service proposes one Alternative Plan. In summary, the plan is:

1. Negotiate long-term contracts with concessioners to transport visitors and vehicles from Davis and Atlantic to Great Island and Long Point.
2. Improve overnight accommodations by removing old cabins at Great Island, constructing new 30 units, of which 10 units would be rustic with communal baths;
3. Adding 10 rustic lodging units with communal baths at Long Point; and
4. Improve IBP relationship and issue annual IBPs to small craft operators to provide transport services for visitors to the Cape Lookout Keeper's Quarters area.
5. The number of parking spaces near the Keeper's Quarters would be reduced. At Long Point and Great Island reduce number of parking spaces from 60 down to 30 during primary nesting/hatchling season.

The Alternative Plan differs from the Preferred Plan in that the 10 units at Long Point would be rustic with communal baths; 10 of the 30 Units at Great Island would be rustic with communal baths; only 30 parking spaces would be available for parking at Long Point and Great Island during the primary turtle and plover nesting/hatchling period; and IBPs would be issued annually instead of biennially.

## No Action

In summary, the no action alternative is:

1. Maintain short-term contracts with concessioners to transport visitors and vehicles from Davis and Atlantic to Great Island and Long Point.
2. Maintain overnight accommodations at Great Island.
3. Maintain the current number of cabins at Long Point.

4. Maintain annual IBPs to small craft operators to provide transport services for visitors to Cape Lookout Keeper's Quarters.
5. Maintain the number of spaces at all parking areas on the island.

## DESCRIPTION OF THE EXISTING ENVIRONMENT

### Non-living Components

Cape Lookout National Seashore is located in the central coastal area of North Carolina between Beaufort and Ocracoke Inlets. The seashore consists of three islands that make up a portion of the North Carolina Outer Banks. South Core Banks, the major portion of Cape Lookout National Seashore, arcs northeastward from Cape Lookout Bight for 25 miles to Drum Inlet. Drum Inlet separates South Core Banks from North Core Banks (which extends northeastward for another 22 miles). Another island located at the southern end of the Core Banks, Shackleford Banks, is 9 miles long and has an east-west orientation with a higher dune system (due to prevailing winds) and larger areas of vegetation. Barden Inlet separates it from South Core Banks. The area of the national seashore encompasses 28,400 acres, including 91-acre site on Harkers Island. More than one-third of the total seashore acreage is comprised of small, scattered islands on the sound side of Shackleford Banks and Core Banks/Portsmouth Island and in the nearshore water surrounding the barrier islands. Approximately 18,400 acres of emergent land compose the barrier islands. No roads connect Core Banks to neither the mainland nor each island with another.

The width of the islands range from 600 feet to 1.75 miles. The ocean is the dominant force of change and the forces of wind and wave action are constantly altering the islands' landscape. The landscape is comprised of low sand dunes (generally not exceeding ten feet on the Core Banks), strips of grassland behind the dunes with shrub thickets and a few hammocks scattered along its length, and an extensive salt marsh between the barrier island and mainland. Sand movement changes the appearance of the island, sometimes accreting, but more often eroding the shoreline. The predominately southwest littoral or along-the-shore currents, daily wave action, high waves and wind during storms are constantly moving the sand.

One of the most significant processes of the ocean is overwash, whereby storm waves from the ocean side penetrate or overtop the foredunes at various locations along the shoreline. This process usually transports large amounts

of sand. When the sand is dropped, deposits known as overwash fans or terraces are created. Sometimes the waves and their deposits extend across the island to the sound side. This sand movement plays an important role in marsh formation.

Summers are warm and humid with normal temperatures averaging in the high 70's (F.) and an average relative humidity of 76 percent. Winter temperatures can go below freezing but average is in the mid to upper 40's (F.). Annual snowfall is 1.9 inches. Fall and spring have lower humidity and are generally mild. Rainy periods occur throughout the year and precipitation averages about 4.67 inches a month. Annual rainfall averages 56.04 inches. Prevailing winds blow from the northeast in the autumn and winter and from the southwest at other times of the year. Wind speeds are lowest (12 to 13 miles per hour) during the summer months and slightly greater during the winter (14 to 15 miles per hour). The area can be hit by severe electrical storms, northeasters (extratropical storms), and hurricanes. Hurricanes in North Carolina generally occur from August to October.

The national seashore is designated as a Class II area for the prevention of significant deterioration in air quality. Even though it seems that most air pollutants are dispersed by maritime winds, the NPS believes that industrial pollutants are lowering the pH values of freshwater bodies in the Southeastern United States. Acid rain effect of freshwater ponds, vegetation and historic resources at Cape Lookout National Seashore are unknown and are not being monitored.

Ocean water temperatures along the Core Banks are 48 to 50 degrees (F.) during January and reach their warmest readings (79 to 80 degrees F.) in August.

Soils for the entire seashore are mapped and discussed in detail in the Soil Survey of the Outer Banks, North Carolina (USDA, SCS, 1977). They are characterized by having poor bearing capacity, instability due to wind and water activity, and high water tables. Therefore, all have severe limitations for development.

There are no known toxic or hazardous waste sites on the Core Banks and there is no evidence that underground tanks have been located in the developed areas. Leaks or spills from abandoned vehicles (later removed) and vehicles of recent and current users are the only known potential source for hazardous materials.

## Living Components

The barrier islands that comprise the North Core and South Core islands support various species of small animals and a variety of vegetation ranging from salt marsh grasses to shrubs and trees. Vegetation is critical in maintaining what little stability exists on the barrier islands. Extensive root systems of maritime grasses help to stabilize sediments, whether windblown or waterborne. The grasses themselves tend to trap windblown sand. In this way, dunes build naturally and the topography is elevated just enough so that other forms of plant life can take root. Vegetation forms distinctive ecological zones across the barrier islands.

## Flora

The Core Banks is fairly uniform with a wide berm, low dunes, grasslands and extensive salt marshes. The latter are a dominant landscape feature on the sound side and their function in maintaining a healthy ecosystem, values for wildlife habitat, and benefit to humans is well documented. They generally exist in the intermittently flooded area between mean sea level and the average spring high tide. The predominant vegetation is composed of dense stands of smooth cordgrass, *Spartina alterniflora*. Salt marshes are dependent upon the cyclic inundation to accumulate peat, sediments, and nutrients. Tidal action also prevents the invasion of upland species and therefore maintains monotypic stands of the cordgrass.

Vegetation on Core Banks forms distinctive ecological zones across the island and have characteristic vegetation as follows:

- Beaches - void of vegetation except unicellular algae.
- Berms - sea oats and other plants trap enough sand at the driftline to form small dunes.
- Tidal flats - a few strands of cordgrass is all that inhabits this area at inlets.
- Dunes - sea oats help form low, scattered dunes in overwash areas. The backsides of the dunes may be heavily vegetated with vines such as Virginia creeper.
- Open grasslands - salt meadow cordgrass and pennywort sparsely grow through sand deposited in overwashes.
- Closed grasslands - dominated by denser stands of salt meadow cordgrass, pennywort, broomsedge and hairgrass. Rushes grow in areas with a higher water table.

- Woodlands - on higher and protected lands, population of live oak, southern red cedar, and American holly form maritime forests. Also, wax myrtle, yaupon, live oak, and marsh elder form shrub thickets.
- High salt marshes - are flooded in spring and during storm tides and are dominated by black needlerush and salt meadow cordgrass.
- Low salt marshes - dominated by salt marsh cordgrass and are flooded at mean low tide.
- Subtidal marine vegetation - extensive stands of eelgrass and widgeon grass can be found in protected, shallow waters.

## Fauna

Marine animals inhabit the intertidal zones of the beaches and tidal flats. Burrowing mole crabs (*Emerita talpoida*) ghost crabs (*Ocypode quadrata*), and coquina clams (*Donax variabilis*) are found on the ocean beaches, and crustaceans and worms on the tidal flats. Many species of commercially valuable invertebrates and fish are supported by the food chain of the seashore's salt marshes and the marshes and tidal creeks serve as extremely productive nursery grounds.

The barrier islands provide habitats for a diversity of birds as well as terrestrial and marine animals. Birds are by far the most numerous with over 275 species identified within the seashore boundaries. Their abundance is due to the seashore's location on the Atlantic Flyway and to lack of development and human disturbance. Of special importance are the bald eagle (*Haliaeetus leucophalus*), peregrine falcon (*Falco peregrinus*), and piping plover (*Charadrius melodus*). The endangered bald eagle and peregrine falcon use the seashore in limited numbers for feeding and resting. The piping plover is threatened along the Atlantic coast and a 1994 survey showed that Cape Lookout had 39 nesting pairs on its beaches. This represents at least two-thirds of the nesting plover pairs in North Carolina. Great numbers of least terns (*Sterna antillarum*), gull-billed terns (*Sterna nilotica*), common terns (*Sterna hirundo*) and black skimmers (*Rynchops niger*) also nest in colonies on the beach/berm, among scattered low dunes, and on tidal flats.

Even though the harsh environment precludes large numbers and diversity, other animals found on the islands include amphibians and reptiles—tree frogs, toads, turtles, and snakes; freshwater fish in the isolated freshwater ponds; mammals—shrews, raccoons, and rabbits—in the shrub thickets; and mosquitoes and other insect pests in wet areas of the dunes, grasslands, and marshes. The ring-necked

pheasant, which is a favorite with some hunters, is an exotic species that exists in the shrub thickets on Core Banks.

## Endangered species

The loggerhead sea turtle (*Caretta caretta*), a threatened species, is a regular summer visitor to the Cape Lookout area. Cape Lookout is on the northernmost nesting range of the loggerhead turtle and provided the largest undeveloped coastline in North Carolina for nesting. The female turtles nest at night on berms of wide, sloping beaches or near the bases of dunes. Since 1989 the park has documented an average of 90 to 100 nests laid each year. The park adopted the U.S. Fish and Wildlife Service's Index Beach Program which requires seven days a week monitoring of sea turtle nesting activities between June 1 and August 15. This program requires a considerable amount of effort from park staff, Student Conservation Association personnel, and volunteers. Nests and hatchlings are protected from vehicles and park visitors through education and beach closures.

The NPS erects vehicle barricades around all relocated and non-relocated sea turtle nests. ORV traffic is routed around the back sides of the nests to prevent vehicle ruts in front of the nests. Some vehicles will illegally drive around these barricades particularly at low tide. Increased educational efforts targeted at the ORV user may reduce or eliminate this type of driving.

Field rangers and resource specialists at the park have been monitoring marine turtles, especially the loggerhead, since 1976. Extensive studies from 1978-1983 have been done whereby nesting turtles were tagged and nests marked during nightly patrols. Since 1984 the park has continued its monitoring activities, documenting strandings, protecting nest sites, relocating endangered nests, and protecting hatchlings. A report, Cape Lookout National Seashore 1998 Sea Turtle Monitoring Program, (Cordes and Rikard, 1998) consolidated data from monitoring activities since 1976 and reported four management recommendations. They included continuing patrols and relocation efforts, screens or cages to prevent raccoon predation, staff training in current monitoring procedures, and education for park visitors. The park also documented a nest laid by a leatherback sea turtle (*Dermochelys coriacea*) and a nest by a green sea turtle (*Chelonia mydas*) in 1994, both endangered species. The park reports regular strandings of loggerhead, green, Kemp's ridley (*Lepidochelys kempii*), and leatherback sea turtles.

Along with the loggerhead sea turtles that inhabit the beaches from late spring through the summer months, piping plover (*Charadrius melodus*) enjoy special status and the

NPS has been exercising its legal obligation to protect them and their habitat. The national seashore provides one of the southernmost habitats of the piping plover. On average 35 pair of piping plovers (approximately two-thirds of nesting pairs in North Carolina) nest and hatch their young on the Core Banks and are normally present from May through the end of August. Monitoring efforts include locating all nests, erecting predator barricades around the nests, and attempting to determine factors affecting productivity. Cape Lookout National Seashore continues to meet U.S. Fish and Wildlife guidelines to protect piping plover especially by closing nesting and foraging areas for chicks. Since 1989, the NPS has not documented any plovers or nests being run over by ORVs.

Cape Lookout National Seashore supports one threatened plant, seabeach amaranth (*Amaranthus pumilus*), of which over 2000 individuals were counted in 1994. The population of this annual plant varies greatly from year to year due to storm influences. Park staff conducts an annual survey of sea beach amaranth. At the present time the park foresees no feasible protection efforts necessary for this plant.

The park has not documented any disturbance of this plant by ORVs. Should the park determine that plants occurring in areas that may be affected by ORVs, those areas would be closed to ORV use. Recently, the park placed a turtle enclosure cage over one plant.

All proposed sites for construction are in areas that have been altered by human activities. The impacts anticipated will be no greater than the past impacts which have led to the development of this area. This site has historically been used for lodging and vehicle storage. The immediate impacts associated with construction are: disturbed earth, dust, noise above the ambient, and disarray. These are short-term impacts that will be gone at the conclusion of the construction phase of this project. The short-term impacts may be mitigated through construction site best management practices. Regularly sprinkling the roads and vehicle circulation routes with water will reduce dust. Regular pick up and disposal of litter and construction debris will reduce the litter problems. Noise and disarray are functions of a construction site and will disappear at the conclusion of construction. Remaining for the long term will be cabins, roads and fewer parking areas.

### State-listed Species

These species are located at various places in the park. The little blue heron (*Egretta caerulea*), snowy egret (*Egretta thula*), glossy ibis (*Plegadis falcinellus*), and tricolored

heron (*Egretta tricolor*) are residents of the marsh. Roseate terns (*Sterna dougallii*) rarely visit the park and do not nest on the national seashore. Gull-billed terns (*Sterna nilotica*) nest in colonies on the beach/berm, among scattered low dunes. Loggerhead shrikes (*Lanius ludovicianus ludovicianus*) are occasional visitors that are found inland. Brown pelicans (*Pelecanus occidentalis*) fly up and down the coast and feed off shore; they do not nest in the park. The Outer Banks kingsnake (*Lampropeltis getula*) may be found in shrub thickets behind the dunes, while the Carolina diamondback terrapin (*Malaclemys terrapin centrata*) and Carolina salt marsh snake (*Nerodia sipedon williamengelsi*) are salt marsh residents. The American alligator (*Alligator mississippiensis*) rarely visits the Core Banks; it has been sighted once on the beach. The NPS has not documented and does not anticipate adverse impacts on State-listed species.

## ANALYSIS OF PROPOSED ACTION AND ALTERNATIVES INCLUDING NO ACTION

### Environmental Impacts and Possible Mitigating and Enhancing Measures

#### Air Quality

Under this plan, there should only be minimal impacts on ambient air quality. There may be increases in vehicular emissions associated with temporary increases in vehicular traffic used to transport workers, supplies, and equipment needed for structure removal and construction of the additional lodging units. Long-term impacts to air quality would be associated with increased traffic due to an expected increase in visitation to the debarkation areas and the national seashore. There is no monitoring or baseline data on air quality that could be used to determine impacts.

Under the no action alternative, emissions associated with vehicular traffic involved in the construction or removal of cabins would not occur. Long-term impacts to air quality would continue as a result of vehicular traffic in the debarkation areas and the national seashore.

#### Water Quality

Based on current guidelines and best available information, project engineers will design sewage systems sufficient in size and loading to handle the calculated design flow associated with expected visitation levels. Under both plans, the concessioners would be responsible for maintaining the cabins' sewage and water systems. This would reduce the

potential impacts to ground water supplies and meet health and safety standards.

Additional withdrawals of ground water will result in more saltwater intrusion. Mitigation efforts focus on instituting water conservation practices such as low-gallon usage systems (showers, toilets), automatic shutoff control on all outdoor faucets, and education of visitors on water conservation measures. Monitoring of salt-water intrusion could be implemented to determine if water-use restrictions need implementing.

Under no action, project engineers and concessioners monitor sewage and water systems to ensure compliance with health and safety standards. Because the concession contracts would be short term, there would be little incentive to make substantial improvements to water conservation practices.

#### **Wetlands and Floodplain Assessment:**

The barrier islands are within the 100-year floodplain and the coastal high hazard area. North Carolina's Coastal Area Management Act provides additional protection to coastal wetlands and the cabins will be constructed in accordance to existing guidelines and regulations. Only minimal impact due to construction in the floodplain is expected from either proposal.

There is no proposed filling or dredging of the marsh wetlands at this site nor is there any intention to maintain or enhance existing marsh wetlands. Using established channels to the Core Banks precludes the necessity of dredging and maintaining channels in undisturbed areas. Therefore, implementing either plan or continuing no action should cause no impact to wetlands and no mitigation is deemed necessary. However, the wetlands could be interpreted in the efforts to increase visitor understanding of the seashore and marsh habitats. Interpretation efforts could be included in the interpretive program that is planned to occur before and when visitors arrive at the Davis facility. At the lodging sites, the NPS will provide printed interpretive materials, erect bulletin board, and present monthly programs.

Under no action, no impact in the floodplain would occur. As no changes to the interpretive program would take place, visitor understanding of the seashore and marsh habitats would not increase.

#### **Prime and Unique Farmland**

No prime or unique farmland is located on the Core Banks therefore thus there are no impacts or mitigation measures needed to address.

#### **Geology and Soils**

The proposed construction would affect undisturbed topsoils. Overall impacts would be minor as this soil is already disturbed and the geology of the Outer Banks is one of shifting sands that are constantly being moved. Because of the geomorphological nature of barrier islands, any increase in sea level rise could greatly influence these islands. All new structure construction will meet State building codes. Overall, new developments under both proposals would allow for the restoration of a 60-space parking area and reduction of the size of another. The total area would be less than that on which development would occur.

Construction impacts of dust, litter, and potential public hazard may be mitigated through construction site best management practices (BMP) and onsite construction inspection. Watering, site fencing and BMPs should mitigate these common construction site impacts. Vigilant inspection should control construction problems.

Under no action, topsoils would remain undisturbed. Because all parking areas would remain as is no restoration of disturbed sites would take place. In that no construction would occur, short-term impacts, such as dust and litter, would not happen.

#### **Fish, Shellfish, Wildlife and their Habitat**

Since parking in the area of the Cape Lookout Environmental Education Center would be closed and another one would be reduced, the remaining portions would be restored to natural conditions. Minimal impacts are expected in the areas of development. Vehicle use would continue using designated travel corridors. No additional impacts to environmentally sensitive areas such as salt marshes, shore bird colonies and sea turtle nests are anticipated.

Under no action, parking areas would not be closed, hence areas would not be restored.

#### **Federally-listed Species**

Under both plans, an emphasis would be placed on monitoring the effects of visitors and visitor use patterns on threat-

ened and endangered species and their habitat and increasing visitor awareness of the island's special resources. Scheduling construction would in part be based upon NPS monitoring and study of ORVs and human interference on these species. The increasing popularity of Cape Lookout National Seashore will result in greater visitation however, NPS has a legal mandate to protect threatened and endangered species and habitat and is aware of the possible effects of ORVs and human interference on the turtles, piping plovers, seabeach amaranth and their habitat. Although, the operation of motor vehicles on turtle and piping plover nesting beaches for recreational purposes is permitted on the Core Banks, during the nesting season beaches designated for nesting and nest relocation are closed to vehicle access. The NPS follows the U.S. Fish and Wildlife Service's protocol for the protection and management of these three species. None of the areas designated by the U.S. Fish and Wildlife Service as critical habitat for wintering piping plovers are in the same locations as the cabins, ferry landings, or parking areas. The NPS documents its adherence to the recommended protocol in an annual report to the U.S. Fish and Wildlife Service. The only documented disturbance by ORVs is illegally driving around turtle enclosures.

The beach environment is where most of the endangered and threatened species are located. Nesting sea turtles, piping plovers and the sea beach amaranth plant can be found in this environment. The actions under each proposal will not occur in the beach area and specific location of individuals and nests. Although the peregrine falcon migrates through Cape Lookout in the summer, none of the actions in these plans are expected to be affected. There may be juvenile bald eagles in the region, although probably not in the areas of the existing development therefore they should not be affected.

Under both plans the NPS would cooperate with user groups and concessionaires to develop a threatened and endangered species awareness program. This program would be directed at cabin occupants and ORV users. Increased interpretive and educational efforts would go toward ensuring visitors respect the NPS responsibility to protect threatened and endangered species.

The proposals are not expected to impact any threatened and endangered species.

Under no action, steps would not be taken to monitor the effects of visitors and visitor use patterns on threatened and endangered species. The NPS would follow the Fish and Wildlife Service's protocol to protect and manage them. No special visitor awareness programs would be developed.

### **State-listed Species**

Both plans would emphasize increasing visitor awareness of the island's special resources, including State-listed birds and reptiles. Construction of new cabins in the Long Point area would be mindful of avoiding shrub thickets, habitat for the Outer Banks king snake. Reducing the size of the cabin area on Great Island would increase the opportunity for restoring the habitat of these creatures. The NPS is aware of the possible effects of ORVs and human interference on nesting and resting shorebirds and their habitat. Motor vehicles are prohibited from entering sections of the beach designated for nesting.

Several of the State-listed species are located in the beach environment and the marsh. Nesting, migrant, and feeding birds may be found in or near this environment. The actions under each proposal will not occur on the beach, near specific locations of individuals and nests, or in the marsh.

Under both plans, the NPS would work with the concessionaires and user groups to heighten the awareness of visitors toward these special resources. This program would be directed at cabin occupants and ORV users. Increased interpretive and educational efforts would help ensure visitor understanding of the responsibility to protect important species.

The proposals are not anticipated to adversely affect any State-listed species.

Under no action, interpretive programs would not go forward to heighten visitor awareness of State-listed species. Nesting areas would continue to be cordoned off from human interference and ORVs. Restoration of habitat for reptiles would not take place in the Great Island area or in parking areas. No direct adverse impacts would occur to species that inhabit the marsh areas.

### **Exotic Dune and Beach Vegetation**

Non-native vegetation is present on the Core Banks. The invasion of more aggressive and competitive non-native vegetation could occur in areas where soil surfaces are disturbed by demolition, construction, and human activity. Invasive exotics may out-compete native species like sea oats and destabilize dunes or shorelines. The implementation of an exotic vegetation management plan to prevent their introduction, establishment, or spread would mitigate their negative impacts. Under the plan, efforts to restrict soil disturbance, identify invasive species, and provide recommendations for management would be identified.

The NPS is not aware of any research regarding the spread of exotic vegetation by ORVs in coastal habitats. Considering the effects of saltspray and the inhospitable nature of the island habitats, it is unlikely that non-native plant species could easily become established and survive without being intentionally planted and maintained.

Under no action, no special efforts would go forward to identify invasive species and provide recommendations for management.

### **Areas of Historic or Archeological Value**

Actions under neither plan or no action affect or intrude on the historic scene associated with the lighthouse. Areas where construction will occur have previously been disturbed so any activities associated with this plan are not expected to impact any historical or archeological resources. To increase the knowledge of visitors to the Core Banks, the NPS would include in its interpretive message materials exploring the story of surf fishing on the Core Banks to visitors arriving at Great Island and Long Point.

Under no action, the story of surf fishing would not be explored.

### **Native American Values and Uses**

There are no prehistoric sites at Cape Lookout National Seashore considered eligible for nomination to the National Register of Historic Places. No traditional Native American values and uses have been identified and therefore no impacts are anticipated.

### **Visitor Experience**

The cabins at Great Island and Long Point are easily accessible and well known to fishermen and others. Upgrading these would mean that the NPS is in compliance with State and Federal building, health, and safety standards. Improving these would ensure that visitors would not have substandard accommodations any longer. Also, the NPS expects to attract a broader range of visitors to these facilities.

Concessioners would have a stronger commitment to maintain the structures and feel less risk to make major capital investments into the facilities with long-term contracts. Recreational values for a majority of visitors would be improved by offering improved lodging and dependable access to the core banks. Some visitors who seek the solitude and quietness so readily available at the Core Banks may object to increased visitation. However, due to the size of the

banks and the concentration of most day users in the vicinity of the Cape Lookout Keeper's Quarters and the lighthouse, the impacts are expected to be negligible.

One of the two parking areas for vehicles would be reduced in size and another would be eliminated. Since the former is rarely used and the latter used even less, the NPS expects this action would not detract from the visitor experience. In fact, the visitor experience should improve because no vehicles will blight visitor views and the area will be allowed to return to a natural state and most likely become suitable habitat for island wildlife.

Implementing either plan or no action should not increase conflicts between user groups since most of the day-use users and fishermen generally occupy different areas. These alternatives do not put these groups in greater contact with each other. No mitigative measures are expected to be necessary.

Under no action, substandard cabins would continue to exist and not appeal to a broad range of visitors. Without a long-term contract concessioner commitment to maintaining structures and making capital improvements would be lacking. Taking no action would have a negligible effect on improving the experience of those seeking solitude and quiet on the Core Banks. Not removing parking areas and restoring natural conditions would have an adverse impact on the visitor experience.

### **Scenic and Recreational Areas**

There would be no adverse effects to scenic values or recreational areas.

### **Noise Levels**

Noise levels would probably be increased during the demolition and construction phases. Afterwards, noise levels would return to current levels. No long-term noise impacts are anticipated.

Under no action, noise levels would continue at current levels.

### **Visitor Use and Park Operations**

Under both plans, the NPS would increase its presence at the concession operations at Davis and Atlantic particularly during May, October, and November. In April, June, July, August, and September, NPS presence would be more limited. Increasing NPS activities at concession operations would



require a reassignment of workstations and may require additional resources and travel time. The park would increase its efforts at monitoring the effects of ORVs and human interference on threatened and endangered species and their habitat

Traditional use patterns would continue if either plan or no action were implemented. NPS operations would be strengthened through long-term concession contracts providing transportation, accommodations, and information about the Core Banks. Both the ferry concessioners and the NPS desire long-term contracts. If the NPS staff issues and manages multiple IBPs biennially, this may reduce the amount of management and administrative time required by NPS personnel. The Preferred Plan would thus have slightly fewer impacts on employee time than issuing IBPs annually as called for in the Alternative Plan.

Using the existing ferry locations, which are familiar to local and frequent visitors, would not disrupt the continuum.

Mitigating the effects of refocusing visitor arrival and IBP operations may be done through demonstration of the advantages to the IBPs. The concentration of informed and prepared visitors is advantageous for educating visitors of the park's resources.

Improving the cabins may attract more visitors to visit the Core Banks during the "low season" and would have minimal impact on most visitors' experience. On the contrary, visitors, who have refused to go for overnight visits because of lodging conditions, would now be served. Maintaining but upgrading the cabins at Great Island and Long Point would meet health and safety standards but not have any adverse impact on traditional uses, cultural resources or natural resources.

Under no action, NPS presence at concessions operations at Davis and Atlantic would be limited year-round. Traditional use patterns would continue. By not improving the cabins, a more diverse audience would not be attracted to stay overnight on the island. Because interpretive efforts would not be expanded, visitor understanding of the island's dynamics would not be enhanced. Issuing IBPs annually would involve greater demands on NPS staff time than proposed by the plan or its alternative.

### **Introduction of Toxic Substances (Compliance with CRCLA and RCRA)**

There are no known reasons or proposals for the use of hazardous materials under either of the plans or no action.

The proposed sites have no history of use as an industrial site or dump and no impacts are anticipated. If any hazardous or toxic waste sites are identified during construction, response plans and remedial actions will be undertaken.

### **Socioeconomic Impacts**

Impacts to social issues are often resolved through the subtle understanding reached through discussion, education and personal agreement of the major issues identified. Having the commitment of concessionaires to invest in boats that accommodate school and large groups would benefit these user groups since some of these groups are now reluctant to visit because present operations require extra time and supervision when groups are split. Accommodating school groups would also benefit the Cape Lookout Environmental Education Center efforts and augment the park's goal to increase the public's understanding about the park's cultural and natural resources. Implementing either plan would have no negative impacts on the public.

Community values adjacent to Cape Lookout are greatly affected by recreational opportunities that the park offers. Local economics are heavily influenced by park visitation: fishing, boating and day-use activities within the park's boundaries. If services are improved and park visitation increases, probably only minimally as a result of either action, businesses within the community should also see an increase of spending in their establishments.

There is a constituency of visitors who value the Core Banks for the native plant and animal communities and natural barrier island processes. They would prefer the barrier islands to revert to natural processes and want no development on the islands. It can be argued that removing parking areas and consolidating the planned construction supports their desires. However, and although aesthetics is subjective, the additional cabins could reduce the aesthetic values of the island to these visitors.

As tourism in Carteret County grows, vandalism and other crimes are likely to increase, too. Although the seashore is difficult to access and visitation is limited, the NPS expects to see an increase in visitation and vandalism/crimes associated with that increase. Some laws will be difficult to enforce because of the length of the park, its remoteness from the mainland, and limited patrol personnel assigned the park. Through an addition to the Superintendent's Compendium in 2000, the park has lowered the speed limit from 35 mph to 25 mph. This action was taken to reduce the opportunity for birds to avoid contact with oncoming vehicles. Some

vehicles drive around enclosures; however, there has been no documentation of a “taking” of endangered species.

Under no action, continuing the current arrangement for transportation to the Cape Lookout Lighthouse area would not include provisions to accommodate school and large groups. Public understanding of the park’s cultural and natural resources would not be enhanced. Maintaining the current cabin situation would not result in an increase for the local economy.

### **Irreversible and Irretrievable Commitments of Resources**

The changes in the natural contours of the land, the fuels and energies expended in construction on this site and the manufacture and transport of construction materials to this site are irretrievable. The resources effected are renewable and the changes this action causes may be mitigated. The majority of the construction materials used are recyclable. The channels used by the ferries to transport visitors to the Core Banks were established prior to the creation of the National Seashore. No “taking” of an endangered species has been documented. Reasonably, there is no irreversible or irretrievable commitment of resources.

Because the function of this site is dependent upon its close proximity to water, construction in a hurricane prone area is required and the licensing, guidelines, and restrictions required in the North Carolina Coastal Zone Management Guidelines will be adhered to. Mitigation of action in this coastal zone will be fulfilled by implementation of the requirements set forth in the guidelines.

Under no action, there is no irreversible or irretrievable commitment of resources.

### **Residual Impacts**

The residual impact of presence will persist at this site once construction is completed. The existing cabins at Great Island are spread out over approximately 163 acres but new buildings and structures will actually be situated on a much smaller area. Structures and human activity are a continuation of long-term effects to an already human-affected area. The additional lodging does not increase the number of lodgers; it only relocates them from another area and will, with time, become a part of the human scene of the island.

The site is an area of existing impacts. It may be argued that the proposed action is an improvement over the existing conditions.

Under no action, the cabins would continue to be spread out over a vast area; one that is much larger than proposed by the plan and its alternative.

### **RECORDATION OF PERSONS, GROUPS, AND GOVERNMENTAL AGENCIES CONSULTED**

The park’s mailing list of potentially interested individuals including businesses, agencies, organizations, and media names will be used as an initial means of consultation for the draft copy of this document. Agencies contacted included the North Carolina Coastal Zone Management, U.S. Army Corps of Engineers, National Marine Fisheries Service, U.S. Fish and Wildlife Service, and other pertinent Federal, State, and local agencies. In addition, other interested groups will be notified. General notice of the opportunity for public comment on this draft environmental assessment for this proposal will be announced through the local newspapers of record and through a news release to the local media.

### **INTENSITY OF PUBLIC INTEREST**

The size and location of this proposal relative to the area and population of the area is enough to make the proposed development one of general public interest.

Specific interest of individuals associated with the fishing clubs is recognized, as is the business and personal interest of the residents of Harkers Island. Public meetings were held in Beaufort, North Carolina in July and September 1998 to gather input from interested parties and individuals on the development of these alternatives. These meetings were announced by Public Notice in newspapers of general circulation, posting of the notice of meeting in public places, announcement of meetings on local radio stations, and a television program of the proposed project was aired on the local television station during 1998. A record of Public Hearing Minutes and an Attendance Record were kept for this effort at public information and involvement. Public meetings on the draft GMP Amendment and Environmental Assessment were held in September 1999.